

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION  
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>7</sup> :  A61K 7/42, 7/48		A1	(11) International Publication Number:  WO 00/24369																
			(43) International Publication Date:  4 May 2000 (04.05.00)																
(21) International Application Number: PCT/CA99/00981		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).																	
(22) International Filing Date: 22 October 1999 (22.10.99)																			
(30) Priority Data: 2,251,457 23 October 1998 (23.10.98) CA																			
(71)(72) Applicants and Inventors: HUNER, Norman [CA/CA]; 207 Windsor Avenue, London, Ontario N6C 2A5 (CA). KROL, Marianna [CA/CA]; 380 Fox Avenue, London, Ontario N6G 1H6 (CA). IVANOV, Alexander [CA/CA]; 100-40 Summit Avenue, London, Ontario N6H 4S3 (CA). SARHAN, Fathey [CA/CA]; 3277 Achim, St. Laurent, Quebec H4K 1V5 (CA).																			
(74) Agent: DEETH WILLIAMS WALL; National Bank Building, Suite 400, 150 York Street, Toronto, Ontario M5H 3S5 (CA).																			
<p><b>Published</b>  <i>With international search report.</i>  <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p>																			
(54) Title: SOLAR RADIATION PROTECTION COMPOSITION																			
<p><b>(57) Abstract</b></p> <p>The invention relates to sunscreen compositions for humans including naturally occurring sunscreen agents from plants, algae, cyanobacteria, fungi and bacteria that protect against exposure to solar radiation. The active sunscreen agents are compounds that naturally occur in plants, algae, cyanobacteria, fungi and bacteria and derivatives of these compounds.</p>																			
<table border="1"> <thead> <tr> <th>Growth Regime</th> <th>Myoxanthophyll (μM PIGMENT / μM CHL)</th> <th>β-Carotene (μM PIGMENT / μM CHL)</th> <th>Zeaxanthin (μM PIGMENT / μM CHL)</th> </tr> </thead> <tbody> <tr> <td>29/150</td> <td>~0.10</td> <td>~0.25</td> <td>~0.02</td> </tr> <tr> <td>15/150</td> <td>~0.48</td> <td>~0.33</td> <td>~0.08</td> </tr> <tr> <td>15/6</td> <td>~0.22</td> <td>~0.18</td> <td>~0.03</td> </tr> </tbody> </table>				Growth Regime	Myoxanthophyll (μM PIGMENT / μM CHL)	β-Carotene (μM PIGMENT / μM CHL)	Zeaxanthin (μM PIGMENT / μM CHL)	29/150	~0.10	~0.25	~0.02	15/150	~0.48	~0.33	~0.08	15/6	~0.22	~0.18	~0.03
Growth Regime	Myoxanthophyll (μM PIGMENT / μM CHL)	β-Carotene (μM PIGMENT / μM CHL)	Zeaxanthin (μM PIGMENT / μM CHL)																
29/150	~0.10	~0.25	~0.02																
15/150	~0.48	~0.33	~0.08																
15/6	~0.22	~0.18	~0.03																